

Author Index

Canadian Journal of Soil Science, Volume 74, 1994

- Acton, D. F., 47
 Allaire, S. E., **349**, 431
 Anderson, D. W., 115, 219, **349**, **357**
 Angers, D. A., 185, 367, **356**
 Arocena, J. M., 291
 Arp, P. A., 393, 421
 Arshad, M. A., 315
 Aubin, A. J., 439
 Ayala-Molina, M., **360**
 Azooz, R. H., 315
- Bailey, L. D., 307
 Barnett, G. M., **349**
 Beauchamp, E. G., 111, 147
 Beaumont, G., 139
 Beke, G. J., 229
 Bettany, J. R., 201
 Bissonnette, **356**
 Boehm, M. M., **349**
 Bomke, A. A., 443
 Bowman, B. T., 59
 Bremer, E., 131, **350**
 Brossard, M., 121
 Bullock, M. S., **358**, **361**
 Bulmer, C. E., 165
- Camiré, C., 247, **350**, **354**
 Cannon, M. E., 335
 Caron, J., 431, **349**, **354**
 Carter, M. R., 367
 Cavers, C. G., **350**
 Chanasyk, D. S., 85
 Chebosi, P. K., **358**
 Cho, C. M., **354**
 Chow, T. L., 453
 Cieslinski, G., **362**
 Colin, M. C., **357**
 Cooper, J. M., **358**
 Corre, D., **350**
 Côté, B., 387
 Covert, J. A., 111
 Coxworth, E., 267
 Crown, P. H., **359**
 Curtin, D., 157
- de Jong, E., 47, 115, **351**, **353**
 Delisle, F., 259
 Derdour, H., 185
 Desjardins, R. L., 139
- Dormaar, J. F., 55
 Dowuona, G. N., **351**
 Dubbin, W. E., **351**
 Dudas, M. J., 291, 409, 465
- Eilers, R. G., **350**
 Ellert, B. H., 367
 Entz, T., 229
 Eswaran, P., **352**
- Farrell, R. E., **357**
 Feller, C., 121
 Fillmore, S. A. E., **355**
 Findeis, J., 321
 Finlayson, N. M., **362**
 Fox, C. A., 1
 Frossard, E., 121
 Furlan, V., **354**
 Fyfe, C. A., 1
 Fyles, J. W., **362**, 387
- Gallichand, J., **349**, 431
 Gares, R. A., **352**
 Germida, J. J., **363**
 Gilbertson, C., 109
 Goh, T. B., **350**, **351**
 Grant, C. A., 301, 307
 Grant, R. F., **359**
 Green, D. G., 267
 Greer, K. J., **361**
 Gregorich, E. G., **360**, **367**
 Gupta, U. C., 285
- Hall, J. W., 257
 Harnish, J. B., **355**
 Haugen-Kozyra, K. L., 67, 75
 Holmstrom, D. A., **357**
 Huang, P. M., 39, **362**
- Izaurrealde, R. C., 85, **352**, **356**, **360**
- Jain, J. C., **359**
 Jana, S., **359**
 Jans-Hammermeister, D. C., 23, 99
 Janzen, H. H., 109, 131, 229, **350**
 Janzen, R. A., 277
 Jensen, T. L., 23, 99
 Johnston, A. M., 131
 Juma, N. G., 17, 67, 85
- Kabir, Z., **359**
 Kachanoski, R. G., **353**
 Katawatina, R., **359**
- Kayahara, G. J., 29
 Kenney, E. A., **357**
 Kernan, J. A., 267
 Kerrich, R., **359**
 Keyes, D., **352**
 King, D., **357**
 King, D. J., 59
 Klinka, K., 29
 Klita, D. L., **359**
 Knipfel, J. E., 267
 Knott, D., **362**
 Kohut, C. K., 409
 Kowalchuk, T. E., **351**
 Kozak, L. M., **357**, **359**
 Krishnamurti, G. S. R., 39
- Lachapelle, G., 335
 Lafond, G. P., 301
 Lafond, J., **356**, **360**
 Lapierre, C., **356**
 Larney, F. J., **358**, **361**
 Laverdière, M. R., 185
 Lavkulich, L. M., 165
 LaZerte, B., 321
 Lemke, R., **352**, **356**
 Lertzman, K., **360**
 Lessard, R., 139
 Liang, B. C., 235, **360**
 Lindwall, C. W., **361**
 Lobb, D. A., 353
- MacKenzie, A. F., 235
 MacLeod, J. A., 241, 285, **353**
 Malhi, S. S., **363**
 Marquis, F., 247
 Marsh, M., 393
 Marshall, I. B., **355**
 Martin, R. C., **355**
 Martin, T. C., **359**
 Martino, D. L., 193
 McAndrew, D. W., **360**
 McGill, W. B., 23, 67, 75, 99, 277, 465
 McGinn, S. M., **358**
 McKenzie, R. C., 335
 McRae, K. B., **355**
 Mellinger, M., 219
 Mermut, A. R., **351**, **352**, **359**
 Meyer, W. L., 393, 421
 Michalyna, W., **357**
 Milburn, P., **355**
 Miller, J. J., 207
 Miller, M. H., **353**
 Monreal, C. M., 367

- Moulin, A. P., 219
 Mozak, L. M., 47
 Munson, A., 354
- Nartey, E., 351
 N'dayegamiyé, A., 259
 Nestor, P. A., 353
 Nichols, J., 358
 Nkongolo, N., 354
 Nyaki, A. S., 354
 Nyborg, M., 352, 356, 360, 363
- O'Halloran, I., 359, 362
 Ogden, A., 361
 Olness, A., 461
 Ouimet, R., 350, 354
- Padbury, G. A., 355
 Pageau, D., 360
 Papadopoulos, Y. A., 355
 Pattey, E., 139
 Paul, J. W., 111, 147
 Pawluk, S., 207, 291
 Pelletier, F., 361
 Pennock, D. J., 115, 353, 354, 350, 357
 Pettapiece, W. W., 355
 Preston, C. M., 1
 Prevost, D., 361
- Qian, P., 361
- Racz, G. J., 93, 354
 Raverkar, K. P., 277
 Rees, H. W., 357, 453
- Ren, T., 361
 Renan, L., 345
 Richards, J. E., 355
 Rinke, J., 461
 Robertson, J. A., 75
 Rochette, P., 139
 Rodd, A. V., 355
 Rutherford, P. M., 277
- Sanderson, J. B., 241, 353
 Schmidt, M., 360
 Schnitzer, M., 360
 Schoenau, J., 352, 361
 Selles, F., 157
 Shang, C., 362
 Shaykewich, 193
 Shen, J., 361
 Simard, R. R., 259, 356, 360
 Simard, P. R. R., 356
 Simpson, S. E., 355
 Smith, A. E., 439
 Smith, C. A. S., 355
 Smith, R. E., 355
 Solberg, E. D., 352, 356, 360
 Solohub, M., 350
 Soon, Y. K., 179
 Sri Ranjan, R., 350
 Steppuhn, H., 157, 267
 Subair, S., 362
 Szmigielska, A. M., 362
- Temple, W. D., 443
 Thomas, W. G., 355
 Thompson, M. L., 362
- Thurston, J. J., 75
 Tiessen, H., 351
 Topp, E., 139
 Tu, S., 93
- van Kessel, C., 350, 354, 357
 Van Rees, K. C. J., 358, 362
 Voroney, R. P., 360
- Walker, B. D., 357, 362
 Walker, D., 355
 Wall, G. J., 59
 Walley, F., 354
 Wang, C., 357, 362
 Wang, D., 357
 Wang, F. L., 201
 Wang, Q., 29
 Wani, S. P., 67, 75
 Warman, P. R., 358
 Webb, K. T., 357
 Webber, M. D., 358
 Webster, C. P., 355
 Whalen, J. K., 358
 Widden, P., 359
 Wolstenholme, J., 363
 Woodrow, E. F., 357
- Xavier, L. J. C., 363
 Xing, B., 465
 Xu, J. G., 17
- Yu, S., 443
- Zhang, M., 363

Subject Index

Canadian Journal of Soil Science, Volume 74, 1994

- Acanthamoeba*
extractable phospholipid-linked fatty acids, 277
- Acid
acidic leaching of a Podzol Bf horizon, 321
- Acidity
soil-nutrient status under Norway spruce and red pine, 387
- Activité phosphatase
activité phosphatase de sols tropicaux, 121
- n*-alkylammonium cations
layer charge of clays in some parent materials, 291
- Aluminum
acidic leaching of a Podzol Bf horizon, 321
- Ammonia
exchange of ^{15}N among plants in controlled environment studies, 109
- Ammonium acetate
exchangeable cations: storage effects, 421
- Ammonium chloride extractions
exchangeable cations: storage effects, 421
- Atmospheric exchange
exchange of ^{15}N among plants in controlled environment studies, 109
- Barley
cropping system effects on soil water, 85
effect of selenium sources on crop Se, 285
soil quality and barley yields, 75
soil resistance to root penetration, 193
- Biological activity
assessment of soil organic matter in agricultural soils, 367
- Boreal soils
soil nutrient regimes, 29
- Breton loam
soil quality and barley yields, 75
- Buried soils
monosaccharide status of pre-Mazama horizons, 55
- Carbon-13 NMR
micromorphology and ^{13}C NMR spectra of Folisols, 1
- Carbon-14
amount of decomposition of root-released C, 17
- Cation exchange capacity
cation exchange capacities of upland soils, 393
exchangeable cations: storage effects, 421
- Cesium
cesium-137 in Black Chernozemic landscapes, 115
- Chernozem
soil N following legume green manuring, 23
- Clay
cation exchange capacities of upland soils, 393
- Clay swelling
sodium stability of Chernozemic soils, 157
- Collagen
sorption of benzene, toluene, and xylene by collagen, 465
- Complexation
potassium chloride-induced Mn release from soils, 39
- Compost
fate of phenolic compounds from manure in soil, 111
- Composted manure
N dynamics in soil with fresh and composted manure, 147
- Compression
compression d'un sol argileux, 185
- Container
measuring the hydraulic conductivity of peat substrates, 431
- Conventional tillage
cropping system effects on soil water, 85
soil resistance to root penetration, 193
- Copper
copper application on soil and grape copper, 345
- Corn
nitrogen fertilizer efficiency with corn, 235
- Cover and management factor
potato tilling and soil erosion, 453
- Creeping red fescue
cropping system effects on soil water, 85
- Crop development
winter wheat growth and nitrogen demand in south coastal British Columbia, 443
- Crop type
changes in soil zinc, 179
- Cropping systems
cropping systems and active soil N, 67
soil quality and barley yields, 75
- Decomposition
amount and decomposition of root-released C, 17
dynamics of ^{15}N following legume green manuring in two soils, 99
- Direct effect
amount and decomposition of root-released C, 17
- Drying storage
exchangeable cations: storage effects, 421
- Dryland crop rotations
salinity and nutrient distribution, 229
- Érablière
les nutriments de sols extraits à l'eau, 247
- Erosion
spatial variability, 219
- Evaporite
soil solutions from saline soils, 409
- Extraction
multi-element extraction, 461
- Extraits saturés
les nutriments de sols extraits à l'eau, 247
- Fababeau
cropping system effects on soil water, 85
soil quality and barley yields, 75
- Fallow frequency
organic matter as affected by cropping, 131
- Faunal activity
micromorphology and ^{13}C NMR spectra of Folisols, 1
- Fertilisation
les nutriments de sols extraits à l'eau, 247
- Fertilization
nitrogen fertilizer efficiency with corn, 235

- Field studies
carry-over of trifluralin in
Saskatchewan, 439
- Flooding
nitrogen leaching from flooded
soils, 201
- Folisol
micromorphology and ^{13}C NMR
spectra of Folisols, 1
- Forage hay production
organic matter as affected by
cropping, 131
- Forage
effect of selenium sources on crop
Se, 285
- Forest
cation exchange capacities of
upland soils, 393
- Forest floor
soil nutrient status under Norway
spruce and red pine, 387
- Forest soil
micromorphology and ^{13}C NMR
spectra of Folisols, 1
- Forest soil fertility
soil nutrient status under Norway
spruce and red pine, 387
- Formulation
carry-over of trifluralin in
Saskatchewan, 439
- Fractionnement granulométrique
activité phosphatase de sols
tropicaux, 121
- Freeze-thaw
nitrogen leaching from flooded
soils, 201
- Global Positioning System
soil salinity mapping with satellite
global positioning methods, 335
- Grain yield
nitrogen fertilizer efficiency with
corn, 235
- Grape
copper application on soil and
grape copper, 345
- Grassland
cation exchange capacities of
upland soils, 393
- Gray Luvisol
cropping systems and active soil
N, 67
soil quality and barley yields, 75
- Green manure
dynamics of ^{15}N following legume
green manuring in two soils, 99
lupin incorporation—potato N
response, 241
soil N following legume green
manuring, 23
- Greenhouse gas
greenhouse gas fluxes from soils,
139
- Herbicide
carry-over of trifluralin in
Saskatchewan, 439
transport of herbicides and
nutrients in surface runoff, 59
- Holocene soils
monosaccharide status of pre-
Mazama horizons, 55
- Hydraulic conductivity
measuring the hydraulic
conductivity of peat substrates, 431
- Hydraulic gradient
pressure transducer-tensiometer
system, 315
- Hydrophobic domains
sorption of benzene, toluene, and
xylene by collagen, 465
- Immobilization
N dynamics in soil with fresh and
composted manure, 147
- Incremental zero-order equation
sulfur mineralization potential, 259
- Indirect effect
amount and decomposition of root-
released C, 17
- Infiltration
potato tilling and soil erosion, 453
- Intensive crop management
winter wheat growth and nitrogen
demand in south coastal British
Columbia, 443
- Ion exchange
exchangeable cations: storage
effects, 421
- Ionic strength
potassium chloride-induced Mn
release from soils, 39
- Kochia forage
nitrogen fertilization of kochia on
saline soil, 267
- Labile organic matter
organic matter as affected by
cropping, 131
- Labile Zn
changes in soil zinc, 179
- Landscape
cesium-137 in Black Chernozemic
landscapes, 115
monosaccharide status of pre-
Mazama horizons, 55
- Leaf litter
soil nutrient status under Norway
spruce and red pine, 387
- Legume green manuring
dynamics of ^{15}N following legume
green manuring in two soils, 99
soil N following legume green
manuring, 23
- Lignin
sorption of benzene, toluene, and
xylene by collagen, 465
- Low input
winter wheat growth and nitrogen
demand in south coastal British
Columbia, 443
- Luvisol
soil N following legume green
manuring, 23
- Manganese availability/solubility
Mn bioavailability, 93
- Manure
fate of phenolic compounds from
manure in soils, 111
organic matter as affected by
cropping, 131
- Matière organique
activité phosphatase de sols
tropicaux, 121
- Mean layer charge
layer charge of clays in some
parent materials, 291
- Methane oxidation
greenhouse gas fluxes from soils,
139
- Micromorphology
micromorphology and ^{13}C NMR
spectra of Folisols, 1
- Mineral stability
soil solutions from saline soils, 409
- Mineralizable-N
soil nutrient regimes, 29
- Mineralogy
pedogenesis and geochemistry of
ultramafic soils, 165
- Minimum data set
assessment of soil organic matter
in agricultural soils, 367
- Monosaccharides
monosaccharide status of pre-
Mazama horizons, 55
- Native grass
organic matter as affected by
cropping, 131
- Nitrate
tillage and rotation effects on soil
chemical factors, 301

- Nitrate leaching
 lupin incorporation—potato N response, 241
 nitrogen leaching from flooded soils, 201
- Nitrogen-15
 dynamics of ^{15}N following legume green manuring in two soils, 99
 exchange of ^{15}N among plants in controlled environment studies, 109
 N dynamics in soil with fresh and composted manure, 147
 nitrogen fertilizer efficiency with corn, 235
- Nitrogen and sulfur
 sulfur mineralization potential, 259
- Nitrogen availability
 N dynamics in soil with fresh and composted manure, 147
- Nitrogen demand
 winter wheat growth and nitrogen demand in south coastal British Columbia, 443
- Nitrogen fertilization
 nitrogen fertilization of kochia on saline soil, 267
- Nitrogen mineralization
 cropping systems and active soil N, 67
 soil N following legume green manuring, 23
- Nitrogen use efficiency
 nitrogen fertilizer efficiency with corn, 235
- Nutrient storage
 assessment of soil organic matter in agricultural soils, 367
- Nutrient stratification
 tillage effects on soil chemical characteristics, 307
- Oat
 effect of selenium sources on crop Se, 285
- Organic and inorganic nitrogen
 leaching
 nitrogen leaching from flooded soils, 201
- Organic carbon
 cation exchange capacities of upland soils, 393
 sulfur mineralization potential, 259
- Palaeosol
 monosaccharide status of pre-Mazama horizons, 55
- Partitioning
 transport of herbicides and nutrients in surface runoff, 59
- Path analysis
 amount and decomposition of root-released C, 17
- Pea (field)
 cropping system effects on soil water, 85
 dynamics of ^{15}N following legume green manuring in two soils, 99
- Peat substrates
 measuring the hydraulic conductivity of peat substrates, 431
- Penetration resistance
 soil resistance to root penetration, 193
- Persistence
 carry-over of trifluralin in Saskatchewan, 439
- Petiole nitrate-N
 lupin incorporation — potato N response, 241
- pH stratification
 tillage effects on soil chemical characteristics, 307
- Phenolic compounds
 fate of phenolic compounds from manure in soil, 111
- Phospholipid-linked fatty acid
 extractable phospholipid-linked fatty acids, 277
- 2:1 phyllosilicates
 layer charge of clays in some parent materials, 291
- Pisum sativum* (see Pea)
- PL-FAME
 extractable phospholipid-linked fatty acids, 277
- Plantation
 soil nutrient status under Norway spruce and red pine, 387
- Podzol
 acidic leaching of a podzol Bf horizon, 321
 effect of selenium sources on crop Se, 285
- Polarity
 sorption of benzene, toluene, and xylene by collagen, 465
- Positioning
 soil salinity mapping with satellite global positioning methods, 335
- Potassium-40
 radioactivity of parent materials, 47
- Potassium chloride-enhanced Mn uptake
 Mn bioavailability, 93
- Potassium chloride fertilizer
 Mn bioavailability, 93
- Potassium chloride-induced Mn toxicity
 potassium chloride-induced Mn release from soils, 39
- Pre-exponential factor
 potassium chloride-induced Mn release from soils, 39
- Precision farming
 soil salinity mapping with satellite global positioning methods, 335
- Pseudomonas*
 extractable phospholipid-linked fatty acids, 277
- Radioactivity
 radioactivity of parent materials, 47
- Radon
 radioactivity of parent materials, 47
- Rainfall simulation
 transport of herbicides and nutrients in surface runoff, 59
- Redox potential
 nitrogen leaching from flooded soils, 201
- Remineralization
 N dynamics in soil with fresh and composted manure, 147
- Resin
 multi-element extraction, 461
- Résistance en traction des agrégats
 compression d'un sol argileux, 185
- Retrait
 compression d'un sol argileux, 185
- Root penetration
 soil resistance to root penetration, 193
- Root-released C
 amount and decomposition of root-released C, 17
- Rotation
 tillage and rotation effects on soil chemical factors, 301
- Row-sideslope
 potato tilling and soil erosion, 453
- Runoff
 transport of herbicides and nutrients in surface runoff, 59
- S uptake
 sulfur mineralization potential, 259
- Saline soil
 nitrogen fertilization of kochia on saline soil, 267

- Salinity**
 nitrogen fertilization of kochia on saline soil, 267
 soil salinity mapping with satellite global positioning methods, 335
 soil solutions from saline soils, 409
- Satellite navigation**
 soil salinity mapping with satellite global positioning methods, 335
- Saturated paste extracts**
 soil solutions from saline soils, 409
- Seasonal dynamics**
 genesis of Solonetzic soils, 207
- Selcote**
 effect of selenium sources on crop Se, 285
- Semi-arid region**
 salinity and nutrient distribution, 229
- Sequential extraction**
 changes in soil zinc, 179
- Serpentine**
 pedogenesis and geochemistry of ultramafic soils, 165
- Seuils hydriques de comportement**
 compression d'un sol argileux, 185
- Silica**
 acid leaching of a podzol Bf horizon, 321
- Site index**
 soil nutrient regimes, 29
- Slope steepness**
 potato tilling and soil erosion, 453
- Sodic hazard**
 sodium stability of Chernozemic soils, 157
- Sodium selenate**
 effect of selenium sources on crop Se, 285
- Soil**
 copper application on soil and grape copper, 345
 multi-element extraction, 461
- Soil electrical conductivity**
 soil salinity mapping with satellite global positioning methods, 335
- Soil fertility**
 nitrogen fertilization of kochia on saline soil, 267
- Soil lipids**
 extractable phospholipid-linked fatty acids, 277
- Soil N dynamics**
 soil N following legume green manuring, 23
- Soil N supply**
 winter wheat growth and nitrogen demand in south coastal British Columbia, 443
- Soil nitrate and phosphate**
 salinity and nutrient distribution, 229
- Soil nutrient regime**
 soil nutrient regimes, 29
- Quantitative classification**
 soil nutrient regimes, 29
- Soil organic matter**
 assessment of soil organic matter in agricultural soils, 367
- Soil pH**
 cation exchange capacities of upland soils, 393
- Soil pore water pressure**
 pressure transducer-tensiometer system, 315
- Soil processes**
 pedogenesis and geochemistry of ultramafic soils, 165
- Soil quality**
 assessment of soil organic matter in agricultural soils, 367
 cropping systems and active soil N, 67
 soil quality and barley yields, 75
- Soil redistribution**
 cesium-137 in Black Chernozemic landscapes, 115
- Soil respiration**
 greenhouse gas fluxes from soils, 139
- Soil salinity**
 salinity and nutrient distribution, 229
- Soil solutions**
 soil solutions from saline soils, 409
- Soil structure**
 assessment of soil organic matter in agricultural soils, 367
- Solodization**
 genesis of Solonetzic soils, 207
- Solonetzic catena**
 genesis of Solonetzic soils, 207
- Solonization**
 genesis of Solonetzic soils, 207
- Sols tropicaux à argile 1:1**
 activité phosphatase de sols tropicaux, 121
- Sorption**
 sorption of benzene, toluene, and xylene by collagen, 465
- Spatial uniformity**
 potato tilling and soil erosion, 453
- Spatial variability**
 greenhouse gas fluxes from soils, 139
 spatial variability, 219
- Summerfallow**
 salinity and nutrient distribution, 229
- Sulphate**
 tillage and rotation effects on soil chemical factors, 301
- Temperature**
 N dynamics in soil with fresh and composted manure, 147
- Tensiometer**
 pressure transducer-tensiometer system, 315
- Tensiometer-pressure transducer**
 pressure transducer-tensiometer system, 315
- Texture**
 radioactivity of parent materials, 47
 sulfur mineralization potential, 259
- Thorium**
 radioactivity of parent materials, 47
- Threshold concentration curves**
 sodium stability of Chernozemic soils, 157
- Tillage**
 cropping system effects on soil water, 85
 soil resistance to root penetration, 193
 tillage and rotation effects on soil chemical factors, 301
 tillage effects on soil chemical characteristics, 307
- Topography**
 genesis of Solonetzic soils, 207
 spatial variability, 219
- Toxicité**
 les nutriments de sols extraits à l'eau, 247
- Trace minerals**
 pedogenesis and geochemistry of ultramafic soils, 165
- Trifluralin**
 carry-over of trifluralin in Saskatchewan, 439
- Typic Cryoboralf**
 cropping systems and active soil N, 67
- Ultramafic rocks**
 pedogenesis and geochemistry of ultramafic soils, 165
- Universal soil loss equation**
 potato tilling and soil erosion, 453
- Uranium**
 radioactivity of parent materials, 47

Water quality
 transport of herbicides and
 nutrients in surface runoff, 59

Weathering
 acidic leaching of a podzol Bf
 horizon, 321

Wheat
 soil resistance to root penetration,
 193

Winter wheat
 winter wheat growth and nitrogen
 demand in south coastal British
 Columbia, 443

Yield
 spatial variability, 219

Zea mays L. (see Corn)

Zero tillage
 cropping system effects on soil
 water, 85
 tillage effects on soil chemical
 characteristics, 307
 soil resistance to root penetration,
 193

Zinc fractions
 changes in soil zinc, 179